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fibers 30 that contact the sealed surface. Using flocked fibers to establish the sealing surface makes it somewhat inconsequential what material is used as the substrate. There would be no benefit to making the substitution proposed by the Examiner because it would not enhance the ability of the flocked fibers to perform their sealing function.

One advantage of Applicant's invention is that the sealing qualities are superior to previous designs. The microcellular structure of Applicant's weather stripping increases the contact area, which is one way that an improved seal is achieved. Because *Olson* relies upon flocked fibers on the outside of a plastic foamed substrate, there would be no change to the sealing characteristics if one were to make the substitution proposed by the Examiner. Because there would be no improvement to the sealing characteristics and no other perceived benefit, there is no motivation for making the substitution proposed by the Examiner.

Further, Applicant respectfully disagrees with the Examiner's interpretation of the suggestion in column 2 of the *Park, et al.* reference where it refers to using less polymer for reducing material costs. In the next column, *Park, et al.* point out that such foaming techniques "involve a relatively slow gas-saturating process due to slow gas diffusion." (Column 3, lines 5-7). Later in that same paragraph, *Park, et al.* point out that such processes are expensive because in column 3, lines 12-15, *Park, et al.* point out that there is a need for a technique that can be done at a reasonable cost, which only makes sense if the previously discussed processes were unreasonably expensive. Any alleged material savings provided by the proposed combination, therefore, would be outweighed or at least cancelled out by the increased process time and cost. Therefore, there is no benefit and the combination cannot be made.

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Further, in column 7, *Park, et al.* point out that diffusion of a supercritical fluid into a polymer "is known to be very slow....The time required for a supercritical fluid to diffuse through a distance of 0.5 mm is estimated as 14 hours which means that it takes approximately 14 hours to saturate a 1 mm thick sheet of polymer plastic with a supercritical fluid in batch processes at room temperature." (Column 7, lines 21-32). Even the advancement provided by *Park, et al.* does not eliminate the complexities of the process (although it may take less time).

It follows that the time involved in the proposed substituted material processing is much longer and, therefore, there is not necessarily any savings for the *Olson* arrangement. Further, nothing in the *Olson* reference mentions material savings as a goal. The point is that the single sentence quoted by the Examiner from the *Park, et al.* reference does not provide sufficient motivation for making the substitution because of the associated extended times and additional costs involved with processing such a material. Because there is no motivation for making the combination, the claims cannot be considered obvious over the proposed combination of *Olson* and *Park, et al.*

Claims 2 and 16 were rejected under 35 U.S.C. §103 as being unpatentable over the combination of *Olson* and *Park, et al.* with the further addition of *Hendrix, et al.* For the reasons stated above, this combination cannot be made and those claims cannot be considered obvious. The further addition of *Hendrix, et al.* does not remedy the defect in the proposed base combination of *Olson* and *Park, et al.*

Claims 1-7 and 15-20 were rejected under 35 U.S.C. §103 as being unpatentable over the combination of *Hendrix, et al.* and *Park, et al.* There is no motivation for making this combination, either.

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As pointed out above, while the Examiner recognizes that *Park, et al.* teaches the possibility for reducing the amount of polymer used, there are major drawbacks associated with making the proposed substitution including substantially increasing processing costs and substantially increasing the amount of time required for making weather seals as taught by *Hendrix, et al.* One of the primary goals of *Hendrix, et al.* is to avoid machine down time, which means that *Hendrix, et al.* intends to speed up the weather seal making process. It is, therefore, contrary to the teachings of *Hendrix, et al.* to make the proposed combination suggested by the Examiner. Introducing the more lengthy processing of *Park, et al.* would defeat the time savings provided by the die arrangement of *Hendrix, et al.* and, therefore, the proposed combination cannot be made.

Additionally, the combination of *Hendrix, et al.* and *Park, et al.* will not work. *Hendrix, et al.* requires forming a primary extrudate and then forming a secondary extrudate that is bonded to the primary extrudate using a heat bond. (Column 8, line 63 - column 9, line 2). *Park, et al.*, on the other hand, requires specific procedures to achieve the benefits provided by the *Park, et al.* methodology. As noted in claim 1 (column 11, lines 61-62), *Park, et al.* teaches "releasing a shaped extrudate into ambient conditions essentially immediately after shaping." Such a technique is required to achieve a reliable product using the *Park, et al.* methodology and to take advantage of the increased pressure and temperature arrangement of the *Park, et al.* teachings. This must be done for the full expansion of nucleated supermicrocells as noted in column 6, lines 1-5, of the *Park, et al.* reference.

The *Hendrix, et al.* reference, on the other hand, specifically requires applying heat to the primary extrudate *after* it is formed. It follows that combining the two

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references cannot work; one *requires heating* an extrudate after it is shaped to bond a secondary extrudate to the primary extrudate while the other *avoids heating* an extrudate after it is formed. If one tried to combine the methodology of *Park, et al.* with the teachings of *Hendrix, et al.*, the end product would not satisfy the requirements of *Hendrix, et al.* and likely would not be reliable because it would not have consistent characteristics as desired according to the teachings of *Park, et al.*

The proposed combination of *Park, et al.* and *Hendrix, et al.* defeats the intended operation of either or both of the references and, therefore, cannot be made.

Claims 1, 3-7, 15 and 17-20 were rejected under 35 U.S.C. §103 as being unpatentable over the commercial product Thermwell white cellular rubber weather strip sold in Home Depot combined with *Park, et al.* There is absolutely no motivation for substituting a material made according to the process taught by *Park, et al.* for a rubber material. There are significant differences between the material types and no one skilled in the art would find any motivation for making the substitution absent Applicant's disclosure, which leads to hindsight reasoning. The major differences between processing rubber and processing materials as taught by *Park, et al.* leaves no room for any suggestion to make a wholesale change to the Thermwell product using a different material.

Moreover, Applicant respectfully challenges whether the Thermwell product qualifies as prior art against this application. There is no indication in the information provided by the Examiner that this product was made commercially available early enough to be considered prior art against Applicant's claimed invention. Applicant specifically contests the prior art status of the Thermwell product and respectfully

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demands that the Examiner provide sufficient proof that such a product qualifies as prior art under Title 35 of the United States Code.

In summary, none of the combinations proposed by the Examiner can be made against Applicant's claims because there is no motivation for making the proposed substitutions and changes. Without any benefit to making the benefit, there is no motivation and no *prima facie* case of obviousness. Where a proposed combination would interfere with or defeat the intended operation of one of the references, the combination cannot be made. Further, a combination cannot be made based upon hindsight reasoning, which is based upon Applicant's own disclosure.

Applicant respectfully submits that all claims are allowable and an early notification of allowance is respectfully requested.

Respectfully submitted,

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I hereby certify that this correspondence is being facsimile transmitted to the Patent and Trademark Office (Fax No. (703) 872-9311) on September 23, 2003.


Theresa M. Palmateer

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